

STATENS SERUMINSTITUT

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DEN 1-9-48

Dear Dr. Leiberman.

Many thanks to your letter of August 24 and the culture of *S. typhi* murium L-21. When I have tested it, I will let you know my findings.

In the repeat case I used the strain N. 0459, 37-38 isolated from blood) of *S. typhi* type 2 used for my experiments on the xylose-Delactol relationship. I do not think this phenomenon is due to a "shift mutation" in which the capacity to ferment one sugar is accompanied by the loss on another, and vice versa. The form which does not ferment xylose grows on Delactol medium as on the medium without Delactol which the xylose-fermenting strains are specifically inhibited by Delactol. Perhaps this may be due to a fermentation of Delactol without acid production but with production of some inhibitory substance, in analogy to the inhibition by xylose of the original weakly fermenting form. - I have observed cases of simultaneously acquired fermentation of more than one sugar, but no case of the shift-mutation you ask about.

Yours sincerely

M. M. Christensen.